GI COMPLICATIONS AND NSAIDs

Gastrointestinal complications, up to and including serious bleeding episodes, are a recognised complication of oral NSAID use. Much of the information about this comes from case-control or cohort studies, which have shown an incidence of such events of about 2% - that is occurring in 2 people out of every 100 treated in any one year .

Imagine an RCT...

Randomised controlled studies are usually about efficacy and have relatively small group sizes. While RCTs provide useful information about adverse events which are common, they are usually poor indicators of adverse events which are rare.

Imagine doing a study to examine the effects of co-administration of misoprostol with NSAIDs to protect against serious upper gastrointestinal complications in older patients with chronic rheumatoid arthritis who are taking NSAIDs. Imagine doing a randomised controlled study - what sort of numbers would you need?

If we assume that misoprostol reduces adverse events by 50% or so, and that most patients finished the study, then for a study over six months we would need 7,500 patients.

The actual RCT

Such a study was done in the USA sponsored by GD Searle [1]. Six hundred and sixty four practices in the USA and Canada recruited 8,843 men and women, with a mean age of 68 years, and with most over age 60. These patients took their regular NSAID, but were randomised to receive 400-800 μg misoprostol or matched placebo daily for six months.

Outcomes

All suspicious events were reported. These were then examined by an external review committee of a gastroenterologist, a rheumatologist and an epidemiologist. Without unblinding the treatments the committee determined whether the patient had upper gastrointestinal bleeding. The committee developed a range of 1 1 different definitions - eight of definite upper GI complications (including bleeding and perforation) and three of "probable" complications.

The paper reports each of these separately , but for simplicity and because the definitions were not made before the trial started, *Bandolier* here addresses information about all 11 definitions.

Complications in placebo group

61 of 4439 patients receiving placebo had complications - about 1.4% over six months, or 2.8% over one year .

A multiple linear regression model which looked at 18 potential risk factors indicated that risk factors for serious complications with oral NSAIDs were age 75 years or more, history of peptic ulcer, history of gastrointestinal bleeding and history of heart disease.

The model predicted that for patients with none of the risk factors, the one-year risk of a complication was 0.8%, for patients with any single risk factor it was 2%, and for patients with all four factors it was 18%. With combinations of three of the factors, the one year risk was 8 - 10%.

Effects of misoprostol

34 of 4404 patients receiving misoprostol had bleeding episodes - 0.8% over six months, or 1.6% over one year . This reduction in total complications was significant (odds ratio 0.56; 95% CI 0.37 - 0.85).

Adverse events

Withdrawal because of diarrhoea, abdominal pain or flatulence in the first month of treatment occurred in 20% of patients receiving misoprostol significantly more than 15% of patients receiving placebo. There were some deaths during the study, but these were similar in number in each treatment group.

NNT

For misoprostol to prevent one bleeding event compared with placebo in one year, the number-need-to-treat was 83 (95% CI 55 - 160). This seems to be high, but NNT is dependent upon the risk of an event happening; the more infrequent the event is, the more patients needed to be treated to prevent one event.

If misoprostol was perfect, and prevented *all* bleeding events, the NNT would still be 36. NNT values for preventative measures tend to be relatively high, like the NNT for 40 for aspirin against nothing to prevent one death at five weeks after infarction, or an NNT of 15 to prevent one coronary event for simvastatin compared with placebo over five years (*Bandolier* 17).

NNT and underlying risk

Just how the NNT is affected by the risk of an event happening is shown in the box and figure. A similar degree of risk reduction gives progressively larger NNTs (and wider confidence intervals) as the underlying risk of the event happening diminishes.

NNT and Baseline Risk
(n = 100/group)

Incidence of Event in Controls	Incidence of Event with Active	NNT (95% CI)
80%	40%	2.5 (2 - 3.6)
40% RR 50%	20%	5.0 (3 - 13)
20%	10%	10.0 (5 - 500)

## Comment

This was an interesting, and possibly heroic study. Because of the large numbers of patients studied, it provides useful RCT data about upper gastrointestinal complications in elderly people taking NSAIDS. It confirms information on the incidence of these complications obtained from other sources.

Does it tell us anything about misoprostol? Well, it does demonstrate that misoprostol can reduce the incidence of upper gastrointestinal complications. The number of patients needed to

NNT and Baseline Risk
(n = 100/group, Risk Reduction = 50%)
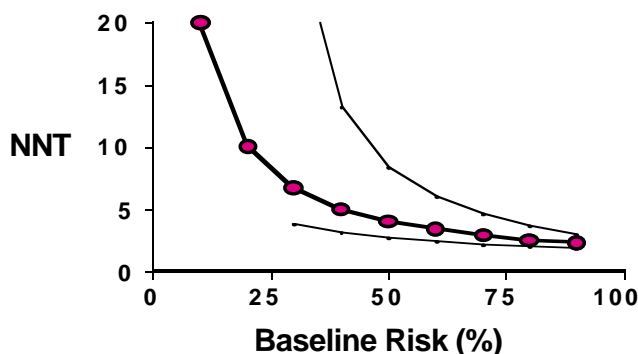
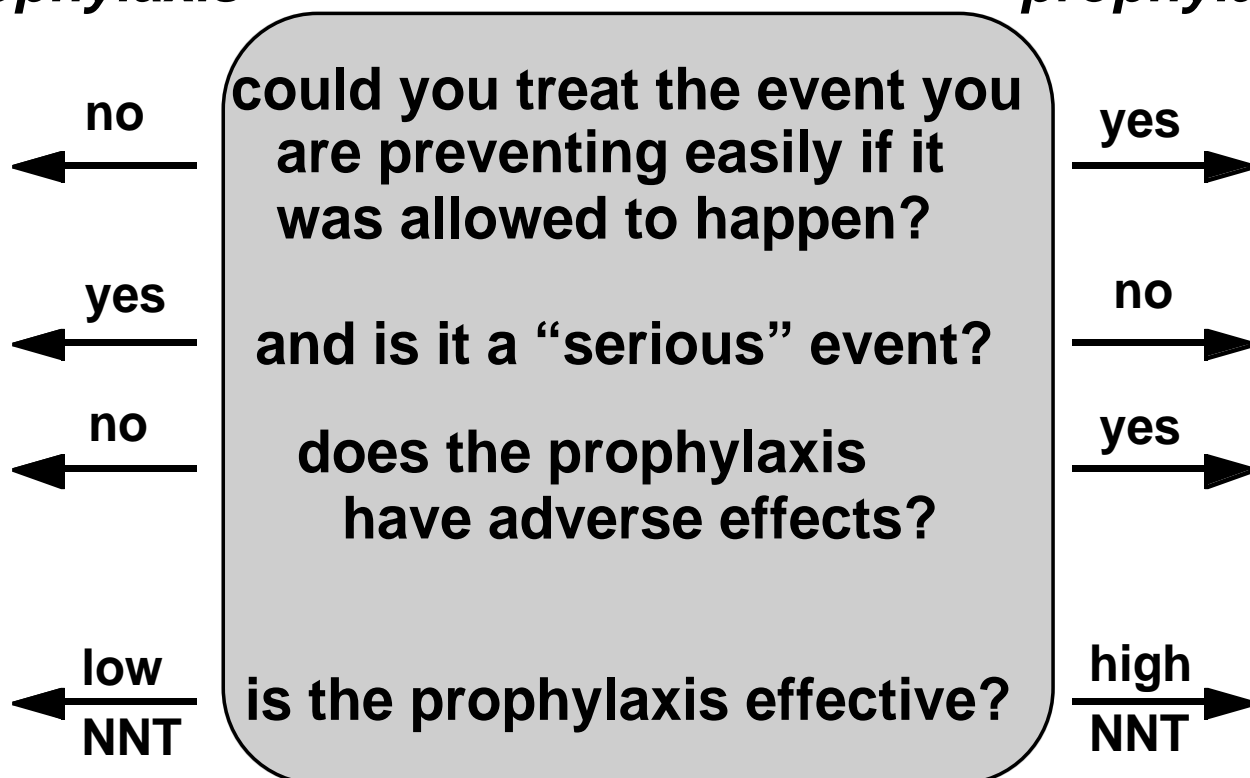be treated to prevent one event was large because of the comparative rarity of the event.

It may well be that in patients with the risk factors identified in this study treatment with misoprostol would be appropriate. As an example, with the same treatment effect of misoprostol as for the whole study (about a 40% reduction in serious complications), but with an 18% incidence of complications, the NNT would be 14.

It may well be the case that NNT calculations done from the trial would show even lower NNT than this in patients with higher risk. It is likely that clear and strong guidelines for prophylactic strategy could be derived from the information on patients at higher risk if the information from this study could be made available.

Bandolier 16 examined some of the issues about prophylaxis, and produced a diagram as an aide-memoir for

bias towards prophylaxis

bias against prophylaxis

no → could you treat the event you are preventing easily if it was allowed to happen? → yes

yes → and is it a "serious" event? → no

no → does the prophylaxis have adverse effects? → yes

low NNT → is the prophylaxis effective? → high NNT

the issues, which is reproduced here as well. It must be remembered that there may be other treatment options available which might have lower risks of gastrointestinal complications. One such would be the use of simple analgesics like paracetamol, rather than the NSAID [2], and another might be topical application of NSAID, which do not cause gastrointestinal complications [3].

References:
1   FE Silverstein, DY Graham, JR Senior et al. Misoprostol reduces serious gastrointestinal complications in patients with rheumatoid arthritis receiving nonsteroidal anti-inflammatory drugs. Annals of Internal Medicine 1995 123:241-9.
2   L March, L Irwig, J Schwartz et al. n Of 1 trials comparing a non-steroidal anti-inflammatory drug with paracetamol in osteoarthritis. British Medical Journal 1994 309:1041-6.
3   Evans JMM, McMahon A, McGilchrist M, et al. Topical non-steroidal anti-inflammatory drugs and admission to hospital for upper gastrointestinal bleeding and perforation: a record linkage case-control study. British Medical Journal 1995 311:22-6.

BROKEN HIPS - BACKGROUND

Hip fracture is an important cause of death and morbidity in the over 65s, especially in women. About 57,000 people are affected every year, accounting for 20% of all orthopaedic beds, with an average cost of stay of £5,000 and a total cost to the NHS of hospital care alone of about £280 million [1].

As the population over 65 increases, and with declining levels of exercise, the problem will get bigger. Several recent reports by the Royal College of Physicians [2], the study of Population Health Outcome Indicators [3] and an Audit Commission report [4] have examined hip fractures. It is likely to be a topic which will demand more attention from purchasers and providers.

Who is most at risk?

Of patients admitted with hip fracture, 87% are over the age of 65, and 82% of these are women. The most common underlying pathology is loss of bone density - osteoporosis.

Risk factors for osteoporosis are many, and include :

- genetic predisposition
- poor nutrition in childhood and adolescence
- early age of onset of menopause
- decreased exposure to sunshine and low vitamin D intake
- low dietary calcium
- alcohol and cigarette use
- caffeine consumption
- low weight
- lack of regular exercise

How big is the problem?

The lifetime risk that a woman will suffer a hip fracture before age 85 years is 12%. For a man it is 5%.

In the population 65 years and over in 1990 there were 249 men and 743 women admitted to hospital for each 100,000 population (age-standardised hospital episode rates).

What is the outcome?

More than 95% of patients have surgery to repair the fracture [5]. Most patients do very well, but in England and Wales in 1990 fracture of neck of femur was responsible for 1,155 deaths, with an additional 416 deaths due to other unspecified similar fractures [3]. Other adverse events, such as infection, thrombo-embolism in the leg and pressure sores cause many problems.

The East Anglian Audit

An audit comparing differences in mortality in East Anglia between eight different hospitals investigated the importance of various factors [5]. There were 580 consecutive admissions, and patients admitted to each hospital were similar in terms of age, sex, pre-existing illnesses and activities of daily living before fracture.

The report showed that 97% of admissions were treated surgically (range 88 - 100%), that 45% received thromboembolic prophylaxis (range 10 - 91%), and 93% pre-operative antibiotics (range 81 - 99%). Mortality at 90 days was 18%, but there was a wide range between hospitals from 5% to 24%.

Being older, having a lower level of day activity being male, and having a history of cardiovascular disease emerged as important determinants of mortality

One hospital stood out as having a much higher survival rate. There was no single factor to which this could be ascribed, and the authors concluded that the hospital's performance appeared to be due to the "overall package of care".

The hospital with the best performance judged by 90-day mortality had a high proportion of patients receiving pharmaceutical thromboembolic prophylaxis (86%), had more than 50% of patients mobilised by the first postoperative day (compared with 2-3 days for the other hospitals), and had the shortest median length of hospital stay at 13 days, compared with 16 - 28 days for the other seven hospitals).

Postoperative thrombosis was diagnosed in 22 of 305 patients who did not receive thromboembolic prophylaxis compared with 9/261 who did. Fatal pulmonary embolism occurred in 12 patients who did not receive prophylaxis, but none in those who did (NNT 25; 95%CI 16 - 52).

The authors of the report paid particular attention in their discussion to thromboembolic prophylaxis. They make the point that patients with a fractured hip are at high risk, with 40 - 80% developing a deep vein thrombosis, 10 - 30% a proximal vein thrombosis, and 1 - 10% having a fatal pulmonary embolism if prophylactic measures are not taken. They con-

clude that written policies that include prophylaxis should be developed and implemented for this vulnerable group of patients if mortality is to be improved.

Reducing mortality and morbidity

Primary prevention

Primary preventative approaches focus on reducing the prevalence of osteoporosis and the number of falls in the elderly (see *Bandolier* 3 and 20).

Secondary and tertiary prevention

This focuses on interventions following admission and measures taken on discharge. Areas that might be covered are shown in the box.

Delays in intervention can occur at a number of stages. In spite of guidelines issued by the Royal College of Physicians recommending that patients with hip fracture wait no more than one hour in A&E, most appear to wait longer [4].There is also evidence that discharge planning for patients is poorly documented. Areas that could be covered might include specification of a target discharge date, assessment and planning of support needed at home in conjunction with other agencies, and involvement of the patients themselves, and their relatives.

Dr Steve Kisely, University of Manchester

Broken hips - measuring performance

Fracture of the hip is an important cause of morbidity and mortality Demographic change will lead to an increasing demand for services. The recent Audit Commission report [4] suggests that care for this condition may be sub-optimal. There is a need, therefore, for health authorities to closely examine this area of care. How might purchasers monitor and address this topic?

Mortality statistics

Comparative mortality statistics for hip fracture could be used by health authorities to measure the health experience of their population, or the performance of local provider units. Studies have shown that certification habits surrounding the certification of fractured neck of femur can vary however. A study of cases of hip fracture within four weeks of death has shown that the percentage of death certificates on which the condition was mentioned at all was only 25%, and as an underlying cause of death in 17% of cases [6].

Hence there may be a general under-reporting of this condition as a cause of death. Pemberton [7] noted that hip fracture may be underestimated by comparing death rates based on Hospital Activity Analysis with OPCS mortality statistics. Local variations in certification practice, combined with the under-reporting of this condition as an underlying cause of death may make comparative mortality statistics difficult to interpret.

> ### Where are we now? - Common themes of good quality care in the management of elderly patients with fractured hip
>
> 1 Spending less than one hour in casualty
> 2 Receiving prophylactic antibiotics
> 3 Receiving pharmaceutical thromboembolic prophylaxis
> 4 Having surgery within 24 hours
> 5 Recording the grade of surgeon and anaesthetist performing the operation
> 6 Number of days after surgery by which 50% of patients were mobilised
> 7 Occurrence of pressure sores, urinary tract infection and pneumonia
> 8 Provision of a thorough medical and social assessment
> 9 Degree and effectiveness of joint working between orthopaedic surgeons and consultants in medicine for the elderly
> 10 Adequacy of discharge planning and implementation

Comparative hospital data

Analysis of information supplied to health authorities in the hospital minimum data set could provide an insight into local management. For example, there is general agreement that pre-operative length of stay should be as short as possible, and that fractures should ideally be operated on within 24 hours [2]. This information could be identified for local providers which would allow a comparison either with other units, or with agreed standards.

Other measures may be more difficult to interpret. Overall length of stay is a common measure used by purchasers to measure performance. Problems arise in interpreting this measure due to case mix, and it has been noted that setting targets in length of stay could reduce the quality and impair the outcome of patient care [8].

It is possible to calculate a local case-fatality ratio for providers, say by looking at what percentage of admissions with fractured neck of femur have a discharge cause of death. Whilst this measure might allow comparisons to be made without the problem of certification practice, interpretation problems still arise. Firstly individual providers may have small numbers of deaths, so that chance effects need to be considered. Secondly, and perhaps most important, is the issue of case mix. If mortality is used as an outcome measure factors affecting prognosis - age, sex, intracapsular or extracapsular fracture and pre-existing conditions like dementia, stroke or cardiac failure - would have to be taken into account.

How to address this

Three influential reports, those of the Royal College of Phy-

sicians [2], the East Anglian Audit [5] and most recently the Audit Commission report [4] have identified a range of process measures and markers of good quality care in the management of elderly patients with fractured hip. It has been noted that disease-specific mortality may be an insensitive tool with which to compare the quality of care between hospitals. Health authorities might find measuring providers' performance against locally agreed process measures and criteria of good practice a better way to address this topic, rather than measuring performance against provider or population-based mortality statistics which may be difficult to interpret.

Dr Mike Bedford, University of Sheffield

References:

1   W Hollingworth, CJ Todd, MJ Parker. The cost of treating hip fractures in the twenty first century. Journal of Public Health Medicine 1995 17:269-76.

2   Royal College of Physicians. Fractured neck of femur, prevention and management: Summary and recommendations of a report of the Royal College of Physicians. Journal of the Royal College of Physicians 1989 23:8-12.

3   AJ McColl, MC Gulliford. Population Health Outcome Indicators for the NHS: a feasibility study. London: Faculty of Public Health Medicine, 1993.

4   Audit Commission. United they stand: co-ordinating care for elderly patients with hip fracture. London: HMSO, 1995.

5   CJ Todd, CJ Freeman, C Camilleri-Ferrante et al. Differences in mortality after fracture of the hip: the East Anglian audit. British Medical Journal 1995 310:904-8.

6   MJ Goldacre. Cause-specific mortality: understanding uncertain tips of the disease iceberg. Journal of Epidemiology and Community Health 1993 47:491-6.

7   J Pemberton. Are hip fractures underestimated as a cause of death? The influence of coroners and pathologists on the death rate. Community Medicine 1988 10:117-23.

8   R Beech, C Withey, M Morris. Understanding variations in lengths of stay between hospitals for fractured neck of femur patients and the potential consequences of reduced stay targets. Journal of Public Health Medicine 1995 17:77-84.

AUDITING & PURCHASING AGENDA

North Thames R&D Directorate have commissioned a report by Dr Colin Sanderson of the London School of Hygiene & Tropical Medicine on evidence-based candidates for the audit and purchasing agenda. The twin aims of the paper were to support the development of an evidence base for local clinical audit. and for commissioning.

The paper sets out ten topics, chosen for the strength of the research evidence for benefits and risks to patients, the potential implications for public health, the feasibility of audit of appropriateness of care, the extent of the problem and the feasibility of changes in terms of attitudes and resources.

The ten topics chosen were:

1   Prenatal steroids to prevent RDS
2   Vacuum extraction vs forceps for obstetric delivery
3   Diagnostic D&C in young women
4   Systemic adjuvant therapy for breast cancer
5   Treatment of H pylori to prevent recurrence of ulcer
6   Thromboprophylaxis for orthopaedic & general surgery
7   Management of mild hypertension
8   Cholesterol screening and cholesterol-lowering drugs
9   Aspirin, thrombolysis and anticoagulation after myocardial infarction
10   ACE inhibitors for chronic heart failure

Bandolier readers who would like a copy of the report, "Evidence based candidates for the audit and purchasing agenda" should send a stamped, self-addressed envelope (57p, first class; 43p, second class) to Marie Cribbon, Office Manager, R&D Directorate, North Thames RHA, 40 Eastbourne Terrace, London W2 3QR.

PROMOTING CLINICAL EFFECTIVENESS

This is the title of a booklet published by the NHSE intended to help Chief Executives of Health Authorities and Trusts to develop ways of promoting greater clinical effectiveness. The reality is that this booklet is useful for anyone interested in doing their job in the NHS well.

The theme of the booklet is Inform - Change - Monitor Inform is all about getting the evidence, assessing need and examining clinical and cost effectiveness. Change is to do with policy making, changing practice, concentrating effort and innovating. Monitor examines measuring health benefit, examining outcome indicators and audit.

INFORM

CHANGE   **MONITOR**
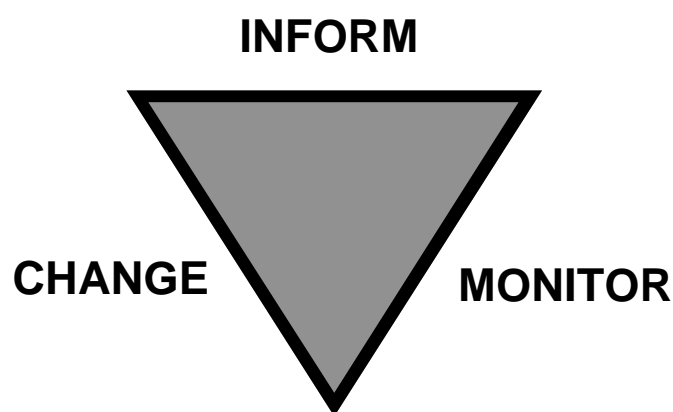
One thing it isn't is dry It is written in an accessible style. It has some lovely examples of ef fectiveness at work and a series of excellent indices which tell the reader where information can be obtained, with contact addresses. There is also a great wall chart which summarises the whole paper

This is worth reading, and worth having on the bookshelf to dip into. If you work in the NHS it is free. It is available from the DoH, Storage and Despatch, PO Box 410, W etherby LS23 7LN.

Tel: 01937 840250   Fax: 01937 845381

SWOTS CORNER
WHAT *IS* AN ODDS RATIO?

Bandolier readers will know that we favour the number-needed-to-treat (NNT) as a way of describing the benefits (or harms) of treatments, both in individual trials and in systematic reviews. Few papers report results using this easily interpretable measure, so *Bandolier* has had to get its head around how to do the calculations.

NNT calculations, though, come second to working out whether an effect of treatment in one group of patients is different from that found in the control groups. Many studies, and particularly systematic reviews, report their results as odds ratios, or as a reduction in odds ratios, and some trials do the same. Odds ratios are also commonly used in epidemiological studies to describe the likely harm an exposure might cause.

Bandolier therefore turned to Jon Deekes, of the Centre for Statistics in Medicine, to answer the question - what the heck is an odds ratio?

Calculating the odds

The odds of an event are calculated as the number of events divided by the number of non-events. For example, on average 51 boys are born in every 100 births, so the odds of any randomly chosen delivery being that of a boy is:

number of boys	51
number of girls	49

or about 1.04

Equivalently we could have calculated the same answer as the ratio of the baby being a boy (0.51) and it not being a bot (0.49). If the odds of an event are greater than one the event is more likely to happen than not (the odds of an event that is certain to happen are infinite); if the odds are less than one the chances are that the event won't happen (the odds of an impossible event are zero).

An odds ratio is.....

An odds ratio is calculated by dividing the odds in the treated or exposed group by the odds in the control group.

Epidemiological studies generally try to identify factors that cause harm - those with odds ratios greater than one. For example, *Bandolier* 20 looked at case-control studies investigating the potential harm of giving high doses of calcium channel blockers for hypertension.

Clinical trials typically look for treatments which reduce event rates, and which have odds ratios of less than one. In these cases a percentage reduction in the odds ratios is often quoted instead of the odds ratio. For example, the ISIS-4 trial reported a 7% reduction in the odds of mortality with captopril, rather than reporting an odds ratio of 0.93.

Relative risks

Few people have a natural ability to interpret event rates which are reported in terms of odds ratios (which may be why bookmakers always use them). Understanding risks, and relative risks, seems to be something easier to grasp.

The risk (or probability) of having a boy is simply 51/100, or 0.51. If for some reason we were told that the risk had doubled (relative risk = 2) or halved (relative risk = 0.5) we feel we have a clear perception as to what this would mean: the event would be twice as likely or half as likely to occur.

Risks and odds

In many situations in medicine we can get a long way in interpreting odds ratios by pretending that they are relative risks. When events are rare, risks and odds are very similar. For example, in the ISIS-4 study 2,231 of 29,022 patients in the control group died within 35 days: a risk of 0.077 [2,231/29,022] or an odds of 0.083 [2,231/(29,022 - 2,231)]. This is an absolute difference of 6 in 1000, or a relative error of about 7%. This close approximation holds when we talk about odds ratios and relative risks, providing the events are rare.

Assessing harm

The first figure shows the relationship between ORs and RRs for studies which are assessing harm. Each line on the graph relates to a different baseline prevalence, or event rate in the control group. We can use this graph to get a grasp of how misleading it could be to interpret ORs as if they were RRs. It is clear that when the prevalence of the event is low, say 1%, the RR is a good approximation of the OR. For example, when the OR is 10, the RR is 9, an error of 10%.

That sort of error is unlikely to be seriously misleading, especially when you remember the likely width of the confidence intervals which go along with the estimates. However, as both the prevalence and OR increase, the error in the approximation quickly becomes unacceptable: if the baseline prevalence is 10% an OR of 4 is equivalent to a RR of 3, a discrepancy of 25%.

Assessing benefit

The second figure indicates the relationship between OR and RR for studies which are assessing benefit. Again, when event rates are very low the approximation is close, but breaks down

base of Systematic Reviews, but more caution is required in their application, especially when there are large variations in baseline event rates.

A fourth point of convenience occurs if we need to make adjustments for confounding factors using multiple regression. When we are measuring event rates the correct approach is to use logistic regression models which work in terms of odds, and report effects as odds ratios.

All of which makes odds ratios likely to be with us for some time - so we need to understand how to use them. Of course its important to consider the statistical significance of an effect as well as its size: as with relative risks we can most easily spot statistically significant odds ratios by noting whether their 95% confidence intervals do not include 1, that's analogous to there being less than a 1 in 20 chance (or a probability of less than 0.05, or gambling odds of better than 19 to 1) that the reported effect is solely due to chance.

Jon Deeks
Centre for Statistics in Medicine   Oxford

as event rates increase. For example, if the event rate is 50% and there is a 20% reduction in the odds, the relative risk adjustment will be little over 10%.

However, in the case of ISIS-4 the 7% reduction in the odds of mortality with captopril corresponds to a 7.7% reduction in risk. So providing that the events are rare and the treatment not too successful, the approximation can be used in these circumstances as well.

Why use an OR rather than RR?

So if odds ratios are difficult to interpret, why do we not always use relative risks instead? Many academics agree and have argued that there is no place for describing treatment effects in clinical trials using odds ratios. However, they continue to be used, especially in systematic reviews.

There are several reasons for this, most of which relate to the superior mathematical properties of odds ratios. Odds ratios can always take values between zero and infinity, which is not the case for relative risk. A keen reader may have already spotted a problem in the sex ratio example cited above: if the baseline risk of having a boy is 0.51 it is not possible to double it!

The range that relative risk can take therefore depends on the baseline event rate. This could obviously cause problems if we were performing a meta-analysis of relative risks in trials with greatly different event rates. Odds ratios also possess a symmetrical property: if you reverse the outcomes in the analysis and look at good outcomes rather than bad, the relationships will have reciprocal odds ratios. This again is not true for relative risks.

Odds ratios are always used in case-control studies where disease prevalence is not known: the apparent prevalence there depends solely on the ratio of sampling cases to controls, which is totally artificial. To use an effect measure which is altered by prevalence in these circumstances would obviously be wrong, so odds ratios are the ideal choice. This in fact provides the historical link with their use in meta-analyses: the statistical methods that are routinely used are based on methods first published in the 1950s for the analysis of stratified case-control studies. Meta-analytical methods are now available which combine relative risks and absolute risk reductions, and will soon be provided in the Cochrane Data-

PATIENTS' PREFERENCES

Will randomised trials eventually become impossible? The question is academic but not unrealistic as the problem of recruiting patients to trials increases. To recruit patients to randomised trials there must be what is called "equipoise" - genuine doubt on behalf of the investigator recruiting patients about which treatment is better. But how does the patient - the recruitee - feel about it? What happens when recruitment levels are low - when potential recruitees made a decision not to participate in a trial?

Particular problems arise when evaluating interventions which require active patient participation and therefore motivation, for example sticking to a diet. Some people have developed what is called "patient preference design" to help them deal with this. The subject is dealt with in an article [1] in the Lancet. A number of strategies are described and discussed for those who would wish to avoid the randomised controlled trial as the best test of effectiveness. This article points out the problems in all these other methods and emphasises that randomised controlled trials should not be seen simply as a means of testing effectiveness, but also as a means of protecting patients.

This thoughtful work arises from the work of a Cochrane Collaboration methods group, emphasising the importance of the Collaboration not simply as a systematic review production line, but as an international movement designed to improve the quality of randomised trials as well as accessibility and usefulness of the results of the trials.

Reference:
1   W Silverman, D Altman. Patients' preferences and randomised trials. Lancet 1996 347:171-4.

Cochrane Corner

The Cochrane Collaboration just keeps on growing. The third annual colloquium in Oslo last October attracted about 300 people from 23 countries. There were 19 review groups formally registered with the Collaboration by the end of last year (one with 10 sub-groups), as well as two fields. They are shown in the box.

Finding the RCTs

One of the tasks undertaken by the Collaboration is searching the medical literature to identify randomised controlled trials (RCTs). The Cochrane Centre in Baltimore (USA) coordinates this activity and perhaps the most important aspect is that identified RCTs are notified to the National Library of Medicine so that they can be tagged as RCT s in MEDLINE. This makes the results of many hours of painstaking handsearching of journals, and of electronic searching available to anyone wanting to do systematic reviews of RCTs.

So far over 10,000 hand search citations and over 14,000 citations identified by electronic means have been transferred, and they will be included in the 1996 version of MEDLINE. With previously coded work from the Collaboration and the National Library of medicine, this makes over 66,000 randomised and controlled clinical trials tagged as such on MEDLINE.

Cochrane Database of Systematic Reviews

This is a beautiful piece of software that is a joy to use. The newly updated version contains 65 reviews and titles for 220 more. It also includes bibliographies of previously published systematic reviews, a bibliography of methodological articles and information on the Cochrane Collaboration.

The CDSR is available on disc and CD-ROM in W indows, Macintosh and DOS formats. The BMJ Publishing Group distribute it (BMA House; fax 0171 383 6662) and a year 's subscription costs £75 (personal) or £100 (institutional).

This is useful information to have on your desk. It may not have all the answers you need right now, but it is getting better all the time. Using it is easy - almost to three clicks and you're there. The graphical displays and commentaries on the results are user-friendly, and obvious just by looking. It's too easy for rocket scientists or computer freaks.

Brownie points

For authors who may have worried that performing and publishing systematic reviews and meta-analyses will not gain them any HEFCE points there is some important news. The UK Higher Education Funding Councils have recognised systematic reviews - "publication of systematic reviews (for example of the Cochrane type) will be considered as an indicator of quality".

Contacting Cochrane

Bandolier's advice to GPs and others is to splash out a little and get used to looking at evidence, and be ahead of the game. Some of you might also want to get actively involved in searching, preparing or maintaining reviews. The address for help and advice about the Cochrane Collaboration is:

UK Cochrane Centre
Summertown Pavilion
Middle way
Oxford OX2 7LG
Tel: 01865 516300
Fax: 01865 51631 1
E-mail: general@cochrane.co.uk

Groups & Fields

Groups and fields registered with the Cochrane Collaboration by November 1995 were:

Collaborative Review Groups:
- Pregnancy & Childbirth
- Subfertility
- Neonatal
- Stroke
- Musculoskeletal (with 10 subgroups)
- Schizophrenia
- Parasitic diseases
- Oral health
- Acute respiratory infections
- Effective professional practice
- Peripheral vascular disease
- Diabetes
- Inflammatory bowel disease
- Chronic wounds
- Airways
- Dementia & cognitive disorders
- Tobacco addiction
- Menstrual disorders
- Cystic fibrosis

Fields:
- Primary health care
- The consumer network